

$\{ \mathbf{f}_1^{(1)}, \mathbf{f}_2^{(1)}, \dots, \mathbf{f}_n^{(1)} \}$ is a basis for V_1 , $\{ \mathbf{f}_1^{(2)}, \mathbf{f}_2^{(2)}, \dots, \mathbf{f}_m^{(2)} \}$ is a basis for V_2 , and $\{ \mathbf{f}_1^{(3)}, \mathbf{f}_2^{(3)}, \dots, \mathbf{f}_k^{(3)} \}$ is a basis for V_3 . Then $\{ \mathbf{f}_1^{(1)}, \mathbf{f}_2^{(1)}, \dots, \mathbf{f}_n^{(1)}, \mathbf{f}_1^{(2)}, \mathbf{f}_2^{(2)}, \dots, \mathbf{f}_m^{(2)}, \mathbf{f}_1^{(3)}, \mathbf{f}_2^{(3)}, \dots, \mathbf{f}_k^{(3)} \}$ is a basis for V .